

Company J. Mark Richardson Lease & Well No. Miller #1
Elevation 1287 Kelly Bushing Location Stalnaker Effective Pay -- Ft. Ticket No. 9188
Date 1/26/81 Sec. 8 Twp. 35S Range 6W County Harper State Kansas
Test Approved by Kenneth Ford Western Representative Dave Sloan-Mark Auzat
Formation Test No. 1 Interval Tested from 3668 ft. to 3675 ft. Total Depth 3675 ft.
Packer Depth 3663 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 3668 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 3655 ft. Recorder Number 2604 Cap. 4150
Bottom Recorder Depth (Outside) 3672 ft. Recorder Number 6246 Cap. 5200
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Gabbert-Jones Drlg. Drill Collar Length 269 I. D. 2.2 in.
Mud Type chemical Viscosity 40 Weight Pipe Length - I. D. - in.
Weight 9.3 Water Loss 12.8 cc. Drill Pipe Length 3364 I. D. 3.8 in.
Chlorides 24,000 P.P.M. Test Tool Length 35 ft. Tool Size 5 1/2 OD in.
Jars: Make WTC Serial Number 408 Anchor Length 7 ft. Size 5 1/2 OD in.
Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Strong; Gas to surface in two minutes on initial flow. See attached sheet for gas measurements.

Recovered 120 ft. of gas cut drilling mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: Head backed out on final flow; pulled tool loose to bleed off pressure.
Tightened and reset tool.

Time Set Packer(s) 6:25 A.M. Time Started Off Bottom 9:00 A.M. Maximum Temperature Broken Thermometer
Initial Hydrostatic Pressure 1779 P.S.I. (A)
Initial Flow Period 30 Minutes (B) 228 P.S.I. to (C) 563 P.S.I.
Initial Closed In Period 30 Minutes (D) 1495 P.S.I.
Final Flow Period 55 Minutes (E) 586 P.S.I. to (F) 719 P.S.I.
Final Closed In Period 45 Minutes (G) 1458 P.S.I.
Final Hydrostatic Pressure 1716 P.S.I. (H)

GAS FLOW REPORT

Date 1/26/81 Ticket 9188 Company J. Mark Richardson
 Well Name and No. Miller #1 Dst No. 1 Interval Tested 3668'-3675'
 County Harper State Kansas Sec. 8 Twp. 35S Rg. 6W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
GAS TO SURFACE TWO MINUTES. PRE FLOW						
	10 min.	94 PSIG	1" orifice			2,334,000 MCFPD
	20 min.	110 PSIG	1" orifice			2,806,000 MCFPD
	30 min.	115 PSIG	1" orifice			2,937,000 MCFPD

SECOND FLOW						
	10 min.	100 PSIG	1½" orifice			6,737,000 MCFPD
	20 min.	110 PSIG	1½" orifice			8,013,000 MCFPD
	30 min.	110 PSIG	1½" orifice			8,013,000 MCFPD

GAS BOTTLE

Serial No. -- Date Bottle Filled --- Date to be Invoiced 1/26/81

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME J. Mark Richardson
 Authorized by Kenneth Ford

WESTERN TESTING CO., INC.

Pressure Data

Date 1/26/81 Test Ticket No. 9188
 Recorder No. 2604 Capacity 4150 Location 3655 Ft.
 Clock No. - Elevation 1287 Kelly Bushing Well Temperature -- °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1779 P.S.I.	Open Tool	6:25P	M
B First Initial Flow Pressure	228 P.S.I.	First Flow Pressure	30 Mins.	30 Mins.
C First Final Flow Pressure	563 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1495 P.S.I.	Second Flow Pressure	30 Mins.	55 Mins.
E Second Initial Flow Pressure	586 P.S.I.	Final Closed-in Pressure	45 Mins.	45 Mins.
F Second Final Flow Pressure	719 P.S.I.			
G Final Closed-in Pressure	1458 P.S.I.			
H Final Hydrostatic Mud	1716 P.S.I.			

* Head backed out, pulled tool loose to bleed off pressure.

PRESSURE BREAKDOWN

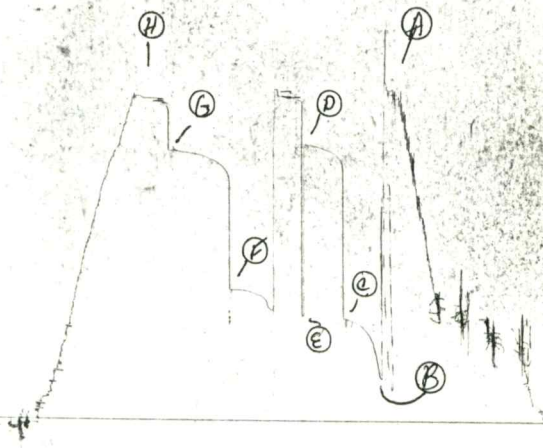
First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>11</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>15</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>228</u>	<u>0</u>	<u>563</u>	<u>0</u>	<u>586</u>	<u>0</u>	<u>719</u>
P 2 <u>5</u>	<u>374</u>	<u>3</u>	<u>1410</u>	<u>5</u>	<u>1733*</u>	<u>3</u>	<u>1349</u>
P 3 <u>10</u>	<u>470</u>	<u>6</u>	<u>1437</u>	<u>10</u>	<u>1746*</u>	<u>6</u>	<u>1376</u>
P 4 <u>15</u>	<u>517</u>	<u>9</u>	<u>1454</u>	<u>15</u>	<u>1752*</u>	<u>9</u>	<u>1393</u>
P 5 <u>20</u>	<u>542</u>	<u>12</u>	<u>1462</u>	<u>20</u>	<u>1781*</u>	<u>12</u>	<u>1408</u>
P 6 <u>25</u>	<u>554</u>	<u>15</u>	<u>1466</u>	<u>25</u>	<u>617</u>	<u>15</u>	<u>1416</u>
P 7 <u>30</u>	<u>563</u>	<u>18</u>	<u>1479</u>	<u>30</u>	<u>680</u>	<u>18</u>	<u>1424</u>
P 8		<u>21</u>	<u>1483</u>	<u>35</u>	<u>694</u>	<u>21</u>	<u>1433</u>
P 9		<u>24</u>	<u>1485</u>	<u>40</u>	<u>709</u>	<u>24</u>	<u>1437</u>
P10		<u>27</u>	<u>1491</u>	<u>45</u>	<u>717</u>	<u>27</u>	<u>1441</u>
P11		<u>30</u>	<u>1495</u>	<u>50</u>	<u>718</u>	<u>30</u>	<u>1445</u>
P12				<u>55</u>	<u>719</u>	<u>33</u>	<u>1448</u>
P13				<u>60</u>		<u>36</u>	<u>1451</u>
P14						<u>39</u>	<u>1455</u>
P15						<u>42</u>	<u>1457</u>
P16						<u>45</u>	<u>1458</u>
P17							
P18							
P19							
P20							

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S. MARK KILIAN
Miller #1
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SKT # 9188

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Company J. Mark Richardson Lease & Well No. Miller #1
Elevation 1289 Kelly Bushing Formation - Effective Pay - Ft. Ticket No. 9133
Date 1/28/81 Sec. 8 Twp. 35 S Range 6W County Harper State Kansas
Test Approved by J. Mark Richardson Western Representative Jim Wondra
Formation Test No. 2 Interval Tested from 3985 ft. to 4020 ft. Total Depth 4020 ft.
Packer Depth 3980 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 3985 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 4010 ft. Recorder Number 2607 Cap. 4150
Bottom Recorder Depth (Outside) 4013 ft. Recorder Number 3351 Cap. 4000
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Gabbert-Jones Drilling Rig #8 Drill Collar Length 260 I. D. 2 1/4 in.
Mud Type chemical Viscosity 42 Weight Pipe Length - I. D. - in.
Weight 9.2 Water Loss 12.0 cc. Drill Pipe Length 3696 I. D. 3.8 in.
Chlorides 40,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.
Jars: Make WTC Serial Number 410 Anchor Length 35 ft. Size 5 1/2 OD in.
Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Weak, increased to strong blow on initial flow period. Strong blow throughout final flow period.

Recovered 2100 ft. of gas in pipe
Recovered 20 ft. of muddy oil
Recovered 180 ft. of heavy oil and gas cut mud
Recovered - ft. of -
Recovered - ft. of -

Remarks: -

Time Set Packer(s) 7:45 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 10:15 ~~P.M.~~ ^{A.M.} Maximum Temperature 122°
Initial Hydrostatic Pressure (A) 2015 P.S.I.
Initial Flow Period Minutes 30 (B) 38 P.S.I. to (C) 53 P.S.I.
Initial Closed In Period Minutes 30 (D) 1527 P.S.I.
Final Flow Period Minutes 60 (E) 114 P.S.I. to (F) 112 P.S.I.
Final Closed In Period Minutes 30 (G) 1395 P.S.I.
Final Hydrostatic Pressure (H) 1970 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 1/28/81 Recorder No. 2607 Capacity 4150 Test Ticket No. 9133
 Clock No. --- Elevation 1289 Kelly Bushing Location 4010 Ft. Well Temperature 122 °F

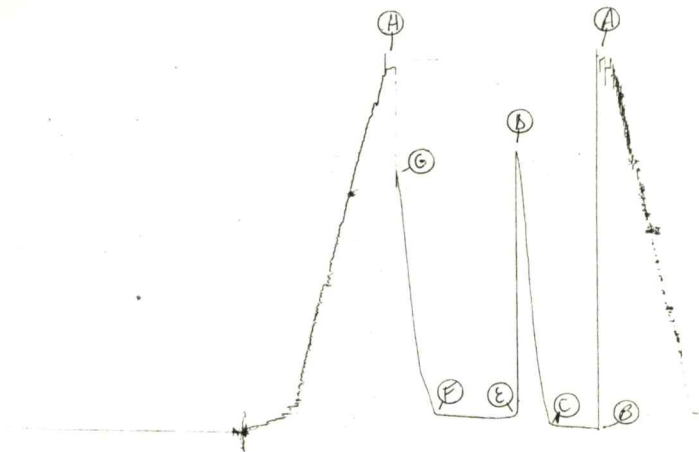
Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	2015 P.S.I.	7:45A	M
B First Initial Flow Pressure	38 P.S.I.	30 Mins.	30 Mins.
C First Final Flow Pressure	53 P.S.I.	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1527 P.S.I.	60 Mins.	60 Mins.
E Second Initial Flow Pressure	114 P.S.I.	30 Mins.	30 Mins.
F Second Final Flow Pressure	112 P.S.I.		
G Final Closed-in Pressure	1395 P.S.I.		
H Final Hydrostatic Mud	1970 P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	
P 1	0	38	0	53	0	114	0	112
P 2	5	40	3	63	5	101	3	174
P 3	10	44	6	131	10	97	6	248
P 4	15	48	9	227	15	95	9	307
P 5	20	49	12	360	20	95	12	402
P 6	25	51	15	540	25	96	15	560
P 7	30	53	18	779	30	100	18	766
P 8			21	1061	35	101	21	981
P 9			24	1276	40	104	24	1190
P10			27	1448	45	106	27	1322
P11			30	1527	50	107	30	1395
P12					55	110		
P13					60	112		
P14								
P15								
P16								
P17								
P18								
P19								
P20								

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Company J. Mark Richardson Lease & Well No. Miller #1
Elevation 1289 Kelly Bushing Formation --- Effective Pay --- Ft. Ticket No. 9134
Date 1/29/81 Sec. 8 Twp 35S Range 6W County Harper State Kansas
Test Approved by J. Mark Richardson Western Representative Jim Wondra
Formation Test No. 3 Interval Tested from 4024 ft. to 4080 ft. Total Depth 4080 ft.
Packer Depth 4019 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 4024 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 4042 ft. Recorder Number 2607 Cap. 4150
Bottom Recorder Depth (Outside) 4045 ft. Recorder Number 3351 Cap. 4000
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor Gabbert-Jones Drilling Rig #8 Drill Collar Length 230 I. D. 2 1/4 in.
Mud Type chemical Viscosity 44 Weight Pipe Length - I. D. - in.
Weight 9.3 Water Loss 10.0 cc. Drill Pipe Length 3765 I. D. 3.8 in.
Chlorides 30,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.
Jars: Make WTC Serial Number 410 Anchor Length 56 ft. Size 5 1/2 OD in.
Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.
Blow: Weak blow throughout flow periods.

Recovered 150 ft. of muddy water (oil on top of tool)

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Remarks: -

Time Set Packer(s) 1:10 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 4:10 ~~P.M.~~ ^{A.M.} Maximum Temperature 123°
Initial Hydrostatic Pressure 2078 P.S.I. (A)
Initial Flow Period 30 Minutes (B) 91 P.S.I. to (C) 74 P.S.I.
Initial Closed In Period 30 Minutes (D) 1609 P.S.I.
Final Flow Period 90 Minutes (E) 123 P.S.I. to (F) 110 P.S.I.
Final Closed In Period 27 Minutes (G) 1490 P.S.I.
Final Hydrostatic Pressure 2067 P.S.I. (H)

WESTERN TESTING CO., INC.

Pressure Data

Date 1/29/81 Recorder No. 2607 Capacity 4150 Test Ticket No. 9134
 Clock No. -- Elevation 1289 Kelly Bushing Location 4042 Ft. --
 Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2078</u> P.S.I.	Open Tool	<u>1:10A</u> M	
B First Initial Flow Pressure	<u>91</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>74</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>1609</u> P.S.I.	Second Flow Pressure	<u>90</u> Mins.	<u>90</u> Mins.
E Second Initial Flow Pressure	<u>123</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>27</u> Mins.
F Second Final Flow Pressure	<u>110</u> P.S.I.			
G Final Closed-in Pressure	<u>1490</u> P.S.I.			
H Final Hydrostatic Mud	<u>2067</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>18</u> Inc.		Breakdown: <u>9</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>91</u>	<u>0</u>	<u>74</u>	<u>0</u>	<u>123</u>	<u>0</u>	<u>110</u>
P 2 <u>5</u>	<u>74</u>	<u>3</u>	<u>602</u>	<u>5</u>	<u>104</u>	<u>3</u>	<u>360</u>
P 3 <u>10</u>	<u>71</u>	<u>6</u>	<u>1082</u>	<u>10</u>	<u>97</u>	<u>6</u>	<u>779</u>
P 4 <u>15</u>	<u>70</u>	<u>9</u>	<u>1311</u>	<u>15</u>	<u>95</u>	<u>9</u>	<u>1071</u>
P 5 <u>20</u>	<u>70</u>	<u>12</u>	<u>1420</u>	<u>20</u>	<u>95</u>	<u>12</u>	<u>1238</u>
P 6 <u>25</u>	<u>71</u>	<u>15</u>	<u>1481</u>	<u>25</u>	<u>95</u>	<u>15</u>	<u>1328</u>
P 7 <u>30</u>	<u>74</u>	<u>18</u>	<u>1521</u>	<u>30</u>	<u>95</u>	<u>18</u>	<u>1391</u>
P 8		<u>21</u>	<u>1555</u>	<u>35</u>	<u>96</u>	<u>21</u>	<u>1431</u>
P 9		<u>24</u>	<u>1578</u>	<u>40</u>	<u>98</u>	<u>24</u>	<u>1462</u>
P10		<u>27</u>	<u>1599</u>	<u>45</u>	<u>98</u>	<u>27</u>	<u>1490</u>
P11		<u>30</u>	<u>1609</u>	<u>50</u>	<u>100</u>	<u>30</u>	
P12				<u>55</u>	<u>103</u>		
P13				<u>60</u>	<u>103</u>		
P14				<u>65</u>	<u>105</u>		
P15				<u>70</u>	<u>106</u>		
P16				<u>75</u>	<u>108</u>		
P17				<u>80</u>	<u>108</u>		
P18				<u>85</u>	<u>108</u>		
P19				<u>90</u>	<u>110</u>		
P20							

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